TEACHERS' RETIREMENT BOARD

INVESTMENT COMMITTEE

Subject:	Credit Enhancement Program- Report on Securitized Business Loans	Item Number: Attachment(s):	6 2
Action:		Date of Meeting:	January 5, 2000
Information:	X	Presenters:	Mr. Rose

EXECUTIVE SUMMARY

One of the 1999-2000 Investment Branch Objectives for the Credit Enhancement Program is to "explore, evaluate, and report on the viability of working with financial institutions to provide credit enhancement for securitized business loans for California companies." This agenda item, in conjunction with the panel discussion in Item 5, focuses on educational aspects of the asset backed securities market, and the securitization of business loans. To assist in understanding the small business loan segment of the asset backed security market, the report examines various types of securitized loans including collateralized loans (CLOs), collateralized debt obligations (CDOs), and small business loan securitizations.

As of 1998, the asset backed securities market represented a market value of more than $2.5 trillion. The process of creating asset backed securities is called securitization. While the securitized market commenced with homogenized products such as home loans, auto loans, and credit card loans, it has expanded to include more challenging assets such as commercial loans and commercial mortgages.

Collateralized Loan Obligations (CLOs)

A Collaterized Loan Obligation (CLO) is a multi-class security created by a commercial bank for the purpose of selling assets designed to shrink the bank's balance sheet and reduce the capital required by the Federal Reserve. The bank is required to keep the "equity" piece of the multi-class security, but can sell the remaining tranches in the capital markets. The bank is able to retain the loan origination income and earns servicing fees on the CLO. The bank benefits from reduced regulatory capital requirements. This action provides increased lending capacity. Normally a CLO results in a higher return on equity for the bank.

INTRODUCTION

As of December 1998, the asset backed securities market represented over $2.5 trillion in market value. The market is important to us as individuals because if you have a mortgage, automobile loan, or credit card balance, you may be part of it without knowing you are a participant.

The traditional method of issuing fixed income securities (bonds) by a corporation relies on the strength of the company balance sheet and the bond is given the commensurate credit rating. The credit rating for the recently developed asset backed securities market relies on the strength of pledged assets. The various types of assets that can be pledged include loans, leases, or revolving lines of credit. Mortgage backed securities are the most common form of bonds that are backed by loans. Mortgage backed securities were first introduced by GNMA in the 1960's backed by VA and FHA loans. Since that time many variations of securities have been packaged and sold by Wall Street. One of the most recent generations is called asset backed securities (ABS) which was introduced in 1985 by CS/First Boston.[1]

While various generations of asset backed securities have many features in common, there are three distinct types of collateral that influence the ABS structure: installment payments, payment at maturity, and revolving credit. (1) Installment loans, such as those made to finance the purchase of autos, homes, or recreational vehicles, have a defined amortization schedule and fixed final maturity dates. (2) Payment at maturity loans, such as business loans and commercial credit, are payable at a fixed maturity date with quarterly or semi-annual installments of interest. (3) Revolving loans such as credit cards and some commercial loans have no fixed maturity, no fixed amortization schedule, and can be paid or extended more or less at the discretion of the borrower. The installment loan structure is relatively homogenous with predictable financial characteristics. The other two structures are more unique and require more expertise to analyze.

Asset backed securities often utilize one or more types of default protection to raise the credit quality rating of the security above that of the underlying loans. These default protections can be in the form of excess servicing, letter-of-credit, reserve fund, third party guaranty, over-collateralization, or senior/subordination structure.[2]

Asset backed securities are structured as a trust, similar to mortgage backed securities. Under the Uniform Commercial Code, there is no need for the trustee to take physical possession of any documents to perfect a security interest in the assets pledged as collateral.

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[1] Fabozzi, Frank J. *The Handbook of Fixed Income Securities*
[2] Fabozzi, Frank J. *The Handbook of Fixed Income Securities*

Asset backed securities offer the investor an undivided interest in a trust formed by the issuer. To establish the trust, the issuer pools or aggregates the assets to be pledged. When assets are pledged to the trust, this process is called securitzation. The interest rate on the pledged assets generally exceeds the pass-through rate of interest on the ABS. The investor receives monthly or quarterly interest payments on the outstanding balance. Each investor receives a pro rata portion of the principal and interest for each payment period. The amount of principal included in the payment is dependent on the scheduled amortization and prepayment rate of the underlying collateral.

ABS are structured to insulate investors against most reasonable foreseeable events. Nevertheless, collateral quality remains important. The credit quality of the ABS is derived in part from the quality of pledged assets. Additional default protection, as listed above, may take the form of excess servicing, letter-of-credit, reserve fund, third party guaranty, over-collateralization, or senior/subordination structure.

In general the cash flow characteristics of ABS are determined by the cash flows associated with the pledged assets. All scheduled payments plus all prepayments are passed through to the investors. Investors evaluate ABS based on the expected timing and certainty of the cash flows. The prepayments can have a substantial impact on the cash flows associated with the security. It is necessary to understand and predict the rate of scheduled payments and of prepayments in order to evaluate the financial attributes of the security.

The universe of asset backed securities is almost endless. Even the music royalties of rock musicians have been estimated, packaged, and sold. Recently, asset backed securities that enable consumers to borrow up to 125% of the value of their homes, have been completed and sold. Despite the periodic problems that have occurred in the ABS marketplace, asset backed securities have been extremely successful mechanisms to expand credit capacity for the benefit of consumers, businesses and the U.S. economy.[3]

How asset backed securities are constructed

One of the most common asset backed securities is made from car loans. However, the same concept can be applied to numerous other assets used as collateral.

1. An automobile dealer offers consumers a loan, typically to finance the purchase of an automobile. The dealer checks the consumer’s credit history and approves the loan.
2. A finance company buys the loan from the automobile dealer, and then pools it with thousands of other auto loans to create an asset backed security. The finance company provides a credit rating agency opinion and a trustee. Most asset backed securities provide additional default protection to help insulate investors from losses.
3. An investment banker is hired by the finance company to underwrite and market the ABS deal. The investment banker divides the total transaction into numerous components or tranches with varying risk/return characteristics.

[3] “A $2.5 Trillion Market You Hardly Know”, *Businessweek Magazine, October 26, 1999*

4. The investor buys some of the tranches. The cash flows are passed through to the investor as interest and principal payments paid by the consumers.[4]

This basic structure has been modified and adapted to a variety of alternative asset combinations.

Forms of default protection

There are multiple forms of default protection from the investors' perspective utilized in the creation of asset backed securities including:

1. Subordination using multiple tranches
2. Letter-of-Credit
3. Recourse
4. Overcollateralization

1. Subordination uses multiple tranches. A tranche refers to one class of a multi-class security. The tranches can be structured many ways, but generically they are designed with the highest rated tranches having the shortest expected maturity, receiving the first cash flows, and providing the lowest yields. Each corresponding tranche has a longer expected maturity, is further down the cash flow hierarchy, and provides a higher yield. The final tranche is considered the equity piece. It has the longest maturity, receives the last cash flow, and provides an equity type of return.

TRANCHE
AAA/Aaa
A/A2
BBB/Baa2
BB/Ba2
Equity

The chart is a generic representation of a multi-class ABS. Bond insurers typically provide credit enhancement for A/A2 tranche thereby taking the credit to AAA. The bond insurers are relying on industrial and geographic diversification of the pool as a means of mitigating risk. As the prospective investor moves down the scale of tranches above, the return becomes more "equity" like and moves out of the realm of credit enhancement.

2. Letter-of Credit - A third party, generally a highly rated financial institution provides a letter-of-credit for the amount of default protection (credit enhancement) required by the credit rating agency. The letter-of-credit provider agrees to reimburse the trust for the amount of losses associated with the pledged collateral up to the amount specified in the letter-of-

[4] "Anatomy of a Deal", Businessweek Magazine, October 26, 1998

credit. If the letter-of-credit provider makes a partial payment, the remaining letter-of-credit liability decreases by that amount.

3. Recourse - Occasionally, the issuer of the asset backed security chooses to provide default protection by agreeing to reimburse the trust for the amount of losses associated with the pledged collateral up to the amount specified. This method of default protection increases the alignment of interest of the issuer and the investor. The credit rating agency evaluates the issuer's overall financial condition prior to accepting a recourse agreement.

4. Overcollateralization - With this type of default protection the issuer must have a larger market value of pledged collateral than asset backed securities. When determining the required amount of overcollateralization, the credit rating agency scrutinizes the pledged collateral. The excess amount of collateral pledged provides a buffer against potential losses in the portfolio.

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Collateralized Debt Obligations (CDOs)

A Collateralized Debt Obligation (CDO) is a multi-class security created by a financial institution for the purpose of creating an investment instrument that serves a diverse class of investors. The financial institution creates a diversified pool of debt obligations by acquiring assets that may include: high yield bonds, commercial loans, emerging market debt, and other debt instruments. The financial manager acquires these loans in the market. The pool of assets is highly diversified and features an equity class with commensurate returns. The financial manager earns a fee to manage these assets and may earn carried interest. The financial institution may sell all the tranches in the capital markets.

Small Business Loan Securitization

Small business loan securitization is similar to the CLO process described above. Securitization of small business loans is a new frontier. Many loans categorized as small business loans have been held by community development agencies which have received funds from the federal and state governments as well as foundations. These community development agencies are now seeking private-sector solutions in their effort to assist local community needs. Securitization allows such development agencies to recapitalize by allowing the agencies to sell off their existing loan portfolios to investors to receive a source of funds to make new community development loans.

Finally, some commercial banks may seek to free up capital by securitizing small business loans as CLOs. To the extent that the regional and local banks can create pools that are acceptable to investors, the securitization of small business loans on a larger scale should continue to increase in the future. There is a second component that may influence commercial banks in the small business loan securitization process: Community Reinvestment Act, or CRA. The Federal Reserve tracks the lending commitments of commercial banks in the inner city areas that each bank serves. Each commercial bank receives “credit” for their lending and investing activities in designated areas. Such motivations may create additional incentives for commercial banks to both lend into the inner city areas and to purchase securities of CRA eligible inner city loans. It is conceivable that a commercial bank could remove a not-rated loan from its balance sheet by securitizing it, and then purchase the loan back as an investment grade rated security for the bank’s investment portfolio.

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Attachment 2 provides in summary format a comparison of Collateralized Loan Obligations, Collaterized Debt Obligations, and Small Business Loan Securitization on such issues as: (1) issuance motivation, (2) market development, (3) underlying assets, (4) size of underlying loans, and (5) investment characteristics.

CATEGORY	COLLATERALIZED LOAN OBLIGATIONS CLOS	COLLATERALIZED DEBT OBLIGATIONS CDOs	SECURITIZED SMALL BUSINESS LOANS
Types of Issuers/Sponsors	**Commercial Banks**	**Money Managers, Insurance Companies, Commercial Banks**	**Regional and Local Commercial Banks and Redevelopment Agencies**
Issuance Motivation	▪ Management of risk based capital ▪ Enhance return of regulatory capital ▪ Balance sheet reduction ▪ Credit Risk Management	▪ Provides “unique” financing for high-yielding fixed income assets ▪ Creates high return asset ▪ Increases assets under management for sponsor	▪ Allow for redevelopment agencies to sell off loans, receive funds to make new loans ▪ Management of risk based capital ▪ Enhance return of regulatory capital ▪ Balance sheet reduction ▪ Credit Risk Management
Market Development	▪ Developed	▪ Developed	▪ Embryonic
Types of Underlying Assets	▪ Commercial and industrial loans	▪ Commercial and industrial loans, high-yield bonds, emerging market debt, structured finance securities	▪ Small Business Loans
▪ Size of Underlying Loan	▪ $5-$20 Mil	▪ $5 -$10 Mil	▪ $150,000 average

Class of Investments	Types of Investors	Types of Investors	Types of Investors
▪ Senior Securities	▪ Non-U.S. Commercial Banks ▪ Commercial Paper ▪ U.S. Insurance Cos. ▪ Money Managers	▪ Non-U.S. Commercial Banks ▪ Commercial Paper Conduits ▪ U.S. Insurance Cos. ▪ Money Managers	▪ Banks for CRA Purposes ▪ Insurance Cos for asset/liability management ▪ Hedge funds
▪ Mezzanine Securities	▪ U.S. Insurance Companies ▪ Non-U.S. Commercial Banks ▪ Hedge Funds ▪ Money Managers	▪ U.S. Insurance Companies ▪ Non-U.S. Commercial Banks ▪ Hedge Funds	▪ N/A
▪ Subordinate/Equity Securities	▪ Sponsoring Bank	▪ Affiliates of the Asset Manager ▪ U.S. and Non-U.S. Insurance Companies ▪ U.S. and Non-U.S. Commercial Banks ▪ High Net Worth Individuals ▪ Pension Funds ▪ Other "Alternative Investment Investors	▪ U.S. and Non-U.S. Insurance Companies ▪ U.S. and Non-U.S. Commercial Banks ▪ Hedge Funds

Average Collateral Rating	▪ BBB or BB	▪ Generally B	▪ Not Rated
Typical Ratings Distribution of Collateral	▪ AAA to BB (with 5% CCC limitation)	▪ BB to B (with BB limitation)	▪ Not Rated
Transaction Sizes	▪ $1 billion to $5 billion	▪ $200 million to $1 billion	▪ $10-$75 million
Diversification of Debt	▪ Geographically on a national basis, across over 30 industrial classifications	▪ Across over 30 industrial classifications	▪ Loans a regional